

## Chapter 2: Land, Property and Equity

### 3. THE MEANING OF LAND

#### 3.1 THE PHYSICAL REACH OF LAND

In *Star Energy Weald Basin Ltd and another v Bocardo SA* [2010] UKSC 35, [2010] 3 WLR 654, the Supreme Court considered and applied the maxim (discussed on p 36) “*cujus est solum, ejus est usque ad coelum et ad infernos*” (“to whomsoever the soil belongs, he owns also to the sky and to the depths”). The case concerned an oil field in the unlikely location of Surrey. The apex of the Palmers Wood Oil Field, located near Caterham, lies beneath a plot of land, the freehold of which is held by Bocardo, the claimant. The defendant, Star Energy, had drilled diagonally from the surface of neighbouring land in order to extract oil from the apex of the field. When, in 2006, Bocardo discovered this, it sought damages from Star Energy. Peter Smith J, deciding the case at first instance, found that, by extracting oil from beneath the surface of the claimant’s land without the claimant’s permission, Star Energy had committed a trespass to Bocardo’s land. This finding was upheld by the Court of Appeal. The Court of Appeal, however, took a different approach to the question of damages. Whereas Peter Smith J had held that substantial damages were payable (equal to 9% of the value of the oil and gas extracted by Star Energy), the Court of Appeal adopted a different interpretation of the statutory compensation provisions laid down by the Mines (Working Facilities and Support) Act 1966. The Court of Appeal found that “compulsory purchase” principles should be applied. On that basis, the question was what would be a fair and reasonable price between a willing land owner and a willing oil company for permission to drill pipelines that would not interfere in any practical or significant way with the land owner’s use of the land. It was found that a court would have assessed such compensation at only £82.50; but in a desire to avoid the need for a court determination, an oil company would have been prepared to be more generous and pay £1000. The damages payable to Bocardo were therefore limited to £1000.

The Supreme Court unanimously upheld the finding that Star Energy had committed a trespass to Bocardo’s land. The majority of the court (Lords Walker, Brown and Collins) also upheld the Court of Appeal’s decision as to damages. Lords Hope and Clarke dissented on the damages question. They accepted that the damages should be assessed on a “compulsory purchase” basis and therefore any increase in the value of Bocardo’s land caused by the result of Star Energy’s drilling scheme had to be disregarded in assessing damages. In contrast to the majority, however, Lords Hope and Clarke held that the geographical position of Bocardo’s land, at the apex of the oil field, gave it a special value to Bocardo which could be taken into account in assessing damages. Whilst finding Peter Smith J’s assessment of damages over-generous to Bocardo, as it was based on a percentage of *all* the oil and gas extracted, not simply on a percentage of the *additional* oil and gas extracted through the unauthorised use of Bocardo’s land, Lords Hope and Clarke would nonetheless have allowed Bocardo to recover substantial damages, rather than the £1000 stipulated by the Court of Appeal and upheld by the majority of the Supreme Court.

As the damages question is rather a technical one, the extract below is confined to Lord Hope's valuable analysis of the "cujus est solum, ejus est usque ad coelum et ad infernos" maxim (or, as Lord Hope calls it, "brocard").

### **Lord Hope**

#### **At paras 4- 31**

4. The issues that this case raises fall into two parts. First, there is the question whether the drilling of the three wells under Bocardo's land was an actionable trespass. Peter Smith J held that it was: [2008] EWHC 1756 (Ch); [2009] 1 All ER 517. His decision was affirmed by the Court of Appeal (Jacob, Aikens and Sullivan LJJ): [2009] EWCA Civ 579; [2009] 3 WLR 1010; [2010] Ch 100. Secondly, if there was an actionable trespass, there is the question what is the correct measure of damages. The measure that was adopted by the trial judge was rejected by the Court of Appeal, which made a very substantial reduction in the award of damages. Bocardo appeal to this court on the damages issue, and [Star Energy] cross-appeal on the issue of trespass.

#### *(a) Trespass*

5. On 21 July 2006 Bocardo commenced proceedings against [Star Energy] for trespass. The question which this issue raises is whether an oil company which has been granted a licence to search, bore for and get petroleum in the licensed area which is beneath land belonging to another, and drills wells at depth beneath that land in order to recover petroleum from within the licensed area without obtaining the landholder's agreement or an ancillary right under the Mines (Working Facilities and Support) Act 1966 to do so, is committing a trespass. [Star Energy] accept that, if a trespass was committed by drilling the wells in the first place, it will have continued until now. In the Court of Appeal Aikens LJ said that it was logical to examine the question of whether there was a trespass as at July 2000 when, having taken account of the fact that the limitation period under section 2 of the Limitation Act 1980 for a claim in trespass is six years, the cause of action arose: [2009] 3 WLR 1010, [2010] Ch 100, para 48. But I agree with him that nothing turns on the precise date at which the issue is considered.

6. It is common ground that a trespass occurs when there is an unjustified intrusion by one party upon land which is in the possession of another: Blackstone, *Commentaries on the Laws of England*, vol 3, p 209; *Clerk & Lindsell on Torts*, 19<sup>th</sup> ed (2006), para 19.01. It is common ground too that Bocardo did not, and does not, own any of the petroleum in the reservoir that is situated beneath its land. Nor does it possess, or have the right to possess, any of that petroleum. Those rights belonged to the holder of the licence granted by the Secretary of State under section 2 of the Petroleum (Production) Act 1934, Conoco (UK) Ltd. They now belong to [Star Energy] as the original holder's assignees. By virtue of section 1 of the 1934 Act, which vested the property in petroleum existing in its natural condition in strata in Great Britain in the Crown, at no time did Bocardo have any

right to search, bore for or get that petroleum from the reservoir beneath its land. Only the Crown or its licensee had the right to do so.

7. The question whether the drilling of the three wells under Bocardo's land, and the continued presence of the well casing and tubing within them, was an actionable trespass raises the following issues: (1) whether Bocardo's title to the land extends down to the strata below the surface through which the three wells and their casing and tubing pass; (2) whether possession or a right to possession is a pre-condition for bringing a claim for trespass and, if so, whether Bocardo has or is entitled to possession of the subsurface strata through which these facilities pass; (3) whether [Star Energy] have a right under the 1934 Act (and subsequently the 1998 Act) to drill and use the three wells and their casing and tubing to extract petroleum from beneath Bocardo's land which gives them a defence to a claim in trespass.

*Ownership: how far below the surface?*

8. There is, of course, nothing new in one person carrying out works under land whose surface is in the ownership or the possession of another. Operations of that kind have been familiar since at least Roman times. They ranged from great public works such as catacombs on the one hand to modest cellars for the storage of wine or other commodities on the other. What is new is the depth at which the operations that are said to constitute a trespass in this case have been carried out. The advance of modern technology has led to the discovery of things below the surface, and the desire to obtain access to and remove them, that were unimaginable when the depths to which people could go were limited by what manual labour could achieve.

9. Bocardo's case is that it is trite law that a conveyance of land includes the surface and everything below it, unless there have been exceptions from the grant such as commonly occurs in the case of minerals. [Star Energy] do not dispute this proposition as a general rule that applies where the rights of the surface owner are interfered with. But they maintain that it does not extend to the depth at which the operations were and are being carried out in this case. The minimum depth was 800 feet, while for the most part the depths were greatly in excess of this. [Counsel for Star Energy] said that he accepted that in law the surface owner owned the substrata to some depth, but not that far. He submitted that the wells and their tubes and casing did not interfere with or enter upon "land" in any meaningful way at all. Moreover the right to search, bore for and get the petroleum was vested in the Crown. Bocardo did not own, and had no right to possess, the petroleum.

10. It has often been said that prima facie the owner of the surface is entitled to the surface itself and everything below it down to the centre of the earth... The proposition that prima facie everything below the surface belongs to the surface owner is often linked to the proposition that everything above it belongs to him too:

“everything up to the sky”, as Sir William James VC put it in *Corbett v Hill* (1870) LR 9 R 671, 673, or “everything under the sky” in the words of Bowen LJ in *Pountney v Clayton* (1883) 11 QBD 820. In *Mitchell v Mosley* [1914] 1 Ch 438, 450, Cozens Hardy MR said that the grant of the land includes the surface and all that is supra – houses, trees and the like – and everything that is infra – mines, earth and clay, etc. Agreeing with him, Swinfen Eady and Phillimore LJJ said that this was a recognised rule of law. Plainly, the source for these remarks was the well-known Latin brocard *cuius est solum, eius est usque ad coelum et ad inferos*.

11. The soundness of this brocard as a proposition of law was questioned in *Commissioner for Railways v Valuer-General* [1974] AC 325...

13. In the Court of Appeal Aikens LJ, referring to Lord Wilberforce’s remarks in *Commissioner for Railways v Valuer-General*, said that he had no doubt that Accursius’s maxim or brocard was not part of English law: [2009] 3WLR 1010, [2010] Ch 100, para 59. Asking himself what the general rule is at common law about the ownership of the substrata below the surface of land, he said that he found it in *Mitchell v Mosley* [1914] 1 Ch 438, but shorn of its references to Accursius’s maxim. In short, he said, the registered freehold proprietor of the surface will also be the owner of the strata beneath the surface of his land, including the whole minerals, unless there has been some express or implied alienation of the whole or a particular part of the strata to another. In his view, at para 60, Bocardo’s title certainly extended to the strata (other than the petroleum) to be found at the depth of the wells up to 2,800 feet below the surface of the Oxted Estate. Precisely how much further into the earth’s crust that ownership might go was a question that he did not need to decide. But if it carried to the centre of the earth landowners, he said, all have a lot of neighbours.

14. I think, with respect, that Aikens LJ was perhaps a little too hasty in asserting that the brocard is not part of English law. It is true that Lord Wilberforce appears to have had little enthusiasm for it. He regarded it as an excuse for dispensing with analysis. But those remarks were made in a case where the question was what was meant by the word “land” in the statute. He seems to have been prepared to accept it as having some relevance as a statement, imprecise though it is, of the rights, prima facie, of owners of land: see his reference to Bowen LJ’s observation in *Pountney v Clayton* (1883) 11 QBD 820, 838. Furthermore, although Aikens LJ adopted what Cozens Hardy MR said in *Mitchell v Mosley* [1914] 1 Ch 438, 450 as an accurate statement of the law if shorn of his references to Accursius’s maxim, it must be acknowledged that it was by reference to that maxim that Cozens Hardy MR said what he did. As Lord Wilberforce pointed out, the maxim only has authority at common law in so far as it has been adopted by decisions, or equivalent authority. I am inclined to think that the observations by the Court of Appeal in *Mitchell v Mosley*, seen against the background of various dicta in the 19<sup>th</sup> Century cases including *Pountney v Clayton* (1883) 11 QBD 820, measure up to that requirement. In the present context, therefore, I believe that the brocard does have something to offer us.

15. The particular relevance of the brocard to the dispute in this case is that, taken literally, it answers [counsel for Star Energy's] point that the wells in question were too deep for the landowner's interest in his land to be affected. If the brocard is accepted as a sound guide to what the law is, there is no stopping point. This makes it unnecessary to speculate as to how it can be applied in practice as one gets close to the earth's centre. The depths to which the wells in question were drilled in this case do not get anywhere near to approaching the point of absurdity. The fact that there were substances at that depth which can be reached and got by human activity is sufficient to raise the question as to who, if anybody, is the owner of the strata where they are to be found. The Crown has asserted ownership of the petroleum, but it does not assert ownership of the strata that surround it. The only plausible candidate is the registered owner of the land above, which is exactly what the brocard itself indicates. [Counsel for Star Energy] was unable to point to any contrary authority.

16. It is perhaps worth looking more closely at the words used by the glossator. The earliest source that we have for them is the *Glossa Ordinaria* which was compiled by Accursius, a professor at the University of Bologna, in the 13<sup>th</sup> century. He set for himself the task of collecting and arranging a vast number of annotations to the *Digest* that had been made by his predecessors in one great work. He supplemented these with annotations of his own. For the most part at least, the authors of these annotations are not identified. The gloss that led to the brocard with which we are all familiar is not attributed to anybody. We have no means of knowing when it was first written down. Francis Lyall, "The maxim *cuius est solum* in Scots Law" [1978] JR 147, 148, observed that the history of its development is obscure. It may have been one of Accursius's own annotations, but it seems just as likely that it was much older. All we can say with confidence is that it was not part of Roman law but that it had been recognised by 1250 when the *Glossa Ordinaria* was completed.

17. The wording of the gloss itself is instructive. Paulus, speaking of urban praedial servitudes, is quoted in the *Digest*, 8.2.1.pr, as follows: "*Si intercedat solum publicum vel via publica, neque itineris actusve, neque altius tollendi servitudes impedit; sed immitendi protegendi prohibendi item fluminum et stillicidiorum servitutum impedit: quia coelum quod supra id solum intercedit, liberum esse debet.*"

The words "*quia coelum*" are then glossed in this way: "*Quia coelum. Nota. Cujus est solum ejus debet esse usque ad coelum.*" Lyall says that in later editions of the *Glossa Ordinaria* this gloss itself is noted with the comment: "*cujus solum, ejus coelum*": [1978] JR 147, 148.

18. I think that it is significant that the glossator took as his starting point the rule that applied to the underlying strata and then applied it to what took place above the surface. The context for the annotation was the proposition that, while the

owner may erect structures as high as he likes on the solum of land in his ownership, his freedom to do so is restricted by the praedial servitude *non altius tollendi* which protects his neighbour's right to light and prospect. The owner of the dominant tenement is entitled to insist that there should be no interference with the sky over his land. The assumption appears to have been that it was generally understood that the ownership of land carried with it the right to everything that lay below the surface. The point that the glossator was making, as an explanation for the praedial servitude, was that the existing rule as to what lay below (*cuius est solum*) should be (*debet esse*) applied to the air-space above it. The rule that applied to the underlying strata appears to have been of greater antiquity.

19. The problems that a rule in these terms might give rise to as man's understanding of the earth's structure improved, airspace began to be used for the passage of aircraft and means were developed to penetrate deep below the surface were not, of course, obvious in the 13<sup>th</sup> century. But the simple notion that each landowner is the proprietor of a column or cylinder of land that stretches down to the centre of the earth and upwards indefinitely into outer space is plainly no longer tenable. The earth is not flat, as the glossator may have supposed. A greater understanding of geology has taught us that most of the earth's interior, due to extremes of pressure and temperature, is a complex and inhospitable structure that is beyond man's capacity to enter or make use of. It has been observed that anything that is drilled below a depth of about 8.7 miles or 14 kilometres would be crushed by the earth's pressure of 50,000 pounds per square inch and vaporised by a temperature of 1,000 degrees Fahrenheit: see John G Sprankling, "Owning the Center of the Earth", (2008) 55 UCLA L Rev 979, 993, fn 84. As Sprankling explains at p 994, productive human activity is possible only within the shallowest portion of the earth's crust, and humans have never penetrated below it. As for that portion of it, the development of heat mining and carbon capture, storage and sequestration technologies to reduce greenhouse gas emissions, which he discusses at pp 1030-1032, would be difficult to achieve if the subsurface within which it is sought to carry out these activities in the public interest were to be broken up into columns of rock owned by the surface owners.

20. As for the position above the surface, the development of powered flight has made it impossible to apply the brocard *usque ad coelum* literally. In *Bernstein of Leigh (Baron) v Skyviews & General Ltd* [1978] QB 479 Baron Bernstein failed in his claim that the defendants, who had flown over his land to take an aerial photograph of his property which they then offered to sell to him, were guilty of trespass. Griffiths J noted at p 485 that the proposition that an owner has certain rights in the air space above his land was well established by authority. In *Kelsen v Imperial Tobacco Co (of Great Britain and Northern Ireland) Ltd* [1957] 2 QB 334, for example, a mandatory injunction was granted ordering the defendants to remove a sign which projected 8 inches over the plaintiff's property on the ground that, applying the brocard, this was a trespass. Griffiths J was willing to accept, as a sound and practical rule, that any incursion into air space at a height which may

interfere with the ordinary user of land was a trespass. But he said that wholly different considerations arise when considering the passage of aircraft at a height which in no way affects the user of the land. In his judgment, at p 488, the balance was best struck by restricting the rights of the owner to such height as necessary for the ordinary use and enjoyment of his land and the structures upon it, and declaring that above that height he has no greater rights in the air space than any other member of the public.

21. [Star Energy] say that this analysis should be applied to subsurface ownership too. They submit that a sensible and pragmatic solution would be for each surface owner to own directly down beneath the boundaries of his land as far down as is necessary for the use and enjoyment of the surface, the buildings on the surface and any minerals which have not been excluded from his ownership by conveyance, common law or statute which lie beneath it. [Counsel for Star Energy] was unable to point to any English authority that provided direct support for this approach to the position beneath the surface. But there is some support for it in the United States...

23. Sprankling, "Owning the Center of the Earth", (2008) 55 UCLA L Rev 979, 991-992, points out however that most modern US legal texts continue to endorse the centre of the earth theory and that almost all modern cases continue to embrace it too...Addressing himself to the question, how far below the earth's surface do property rights extend, he asserts at p 1033 that the surface owner should certainly hold property rights to a portion of the subsurface. After exploring four alternative models – ownership of the entire crust, ownership based on first-in-time exploitative use, ownership for reasonable and foreseeable uses and ownership to a specified depth – he comes down in favour of a specified depth such as 1000 feet, but he acknowledges that reasonable minds may differ as to the appropriate extent. The goal of his article, he said, was to ignite that debate, not to extinguish it: p 1039.

25. Coming closer to home, Dr Jean Howell, "'Subterranean Land law': Rights below the Surface of Land", (2002) 53 Northern Ireland Legal Quarterly 268, 270 acknowledges that it might be argued that the same test as that which Griffiths J applied in *Bernstein of Leigh (Baron) v Skyviews & General Ltd* [1978] QB 479 should be used for land below the surface. But, as she also notes, it was implicit in that case that even above the notional height at which the land owner's usable rights stop, there is not a free for all in the airspace above. To characterise the surface owner's rights as following technological advances as to the depth at which land can be exploited, she says, would offend against all notions of "property" whose defining quality in land is certainty. She concludes, at p 285, that any intrusion into land which is not sanctioned by some countervailing property right will be a trespass and that, although the surface owner will not usually wish to or be able to utilise the ground below the surface, he has rights in the land which could be valuable.

26. In my opinion the brocard still has value in English law as encapsulating, in simple language, a proposition of law which has commanded general acceptance. It is an imperfect guide, as it has ceased to apply to the use of airspace above a height which may interfere with the ordinary user of land: *Bernstein of Leigh (Baron) v Skyviews & General Ltd* [1978] QB 479. The position in Scotland may be different: see *Stair Memorial Encyclopaedia*, vol 19, *Property*, para 198, where the question is seen as relating to the extent of ownership rather than the balancing of rights in the airspace. But I think that the reasons for holding that the brocard has no place in the modern world as regards what goes on below the surface, even in England, are not by any means as compelling as they are in relation to the use of airspace. In *US v Causby* 328 US 256 (1946) the US Supreme Court regarded the airspace as a public highway to which only the public had a just claim. The same cannot be said of the strata below the surface. As Aikens LJ said in the Court of Appeal, it is not helpful to try to make analogies between the rights of an owner of land with regard to the airspace above it and his rights with regard to the strata beneath the surface: [2009] 3 WLR 1010, [2010] Ch 100, para 61. Although modern technology has found new ways of making use of it in the public interest, there is no question of it having become a public highway. The test applied in *Chance v BP Chemicals Inc* 670 NE2d 985, that some type of physical damage or interference with the use of the land must be shown, would lead to much uncertainty. It overlooks the point that, at least so far as corporeal elements such as land and the strata beneath it are concerned, the question is essentially one about ownership. As a general rule anything that can be touched or worked must be taken to belong to someone.

27. The better view, as the Court of Appeal recognised [2009] 3 WLR 1010, [2010] Ch 100, para 59, is to hold that the owner of the surface is the owner of the strata beneath it, including the minerals that are to be found there, unless there has been an alienation of them by a conveyance, at common law or by statute to someone else. That was the view which the Court of Appeal took in *Mitchell v Mosley* [1914] 1 Ch 438. Much has happened since then, as the use of technology has penetrated deeper and deeper into the earth's surface. But I see no reason why its view should not still be regarded as good law. There must obviously be some stopping point, as one reaches the point at which physical features such as pressure and temperature render the concept of the strata belonging to anybody so absurd as to be not worth arguing about. But the wells that are at issue in this case, extending from about 800 feet to 2,800 feet below the surface, are far from being so deep as to reach the point of absurdity. Indeed the fact that the strata can be worked upon at those depths points to the opposite conclusion.

28. I would hold therefore that the appellant's title extends down to the strata through which the three wells and their casing and tubing pass.

### *Possession*

29. The next question is whether possession or a right to possession is a precondition for bringing a claim in trespass. [Star Energy] maintain that possession, not ownership, is essential and that the claim should fail because [Bocado] is not in possession of the substrata where the wells entered the substrata at least 800 feet below the surface of its land.

30. In *Powell v McFarlane* (1977) 38 P & CR 452, 470 Slade J said: “In the absence of evidence to the contrary, the owner of land with the paper title is deemed to be in possession of the land, as being the person with the prima facie right to possession. The law will thus, without reluctance, ascribe possession either to the paper owner or to persons who can establish a title as claiming through the paper owner.”

In *Pye (JA) (Oxford) Ltd v Graham* [2003] UKHL 30, [2003] 1 AC 419, para 40 Lord Browne-Wilkinson approved of this definition, making the point that, without the requisite intention, in law there can be no possession. This is highly relevant if the law is to attribute possession of land to a person who cannot establish a paper title to possession. But in this case the appellant has the paper title. That, in the absence of evidence to the contrary, is enough for it to be deemed to be in possession of the land.

31. As Aikens LJ said in the Court of Appeal, it is difficult to say that the appellant has actual possession of the strata below the Oxted Estate as it has done nothing to reduce those strata into its actual possession: [2009] 3 WLR 1010, [2010] Ch 100, para 66. But he held that the appellant, as the paper title owner to the strata and all within it (other than any gold, silver, saltpetre, coal and petroleum which belong to the Crown at common law or by statute), has the prima facie right to possession of those strata so as to be deemed to be in factual possession of them. I think that he was right to conclude that this was the effect of Slade J’s dictum. As the paper title carries with it title to the strata below the surface, [Bocado] must be deemed to be in possession of the subsurface strata too. There is no one else who is claiming to be in possession of those strata through [Bocado] as the paper owner.

The decision in *Bernstein of Leigh (Baron) v Skyviews & General Ltd* [1978] QB 479 is discussed at pp.36-38 of the book. It is important to note that Star Energy attempted to apply the reasoning in that case to the question of how far *below* ground the rights of a freehold owner extend. So, just as it can be argued that modern developments mean that a freehold owner cannot hope to have complete control over the use of airspace above his land, it was argued by Star Energy that it would now be inappropriate for such an owner to have complete control over subterranean access to the area below the surface of his land. Lord Hope, however, rejected that argument: a freehold owner’s rights are therefore better protected below ground than above it.